Proposal for a multicenter research using the Nursing Activities Score (NAS)

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BACKGROUND: There is evidence that nursing workload is associated with the quality of patient care and the health of workers.

Therefore, the use of an objective measuring instrument that allows to investigate the relationship between workload and the adequacy of nursing staff in intensive care units is relevant and of interest to nurses, from different countries.

Considering that the Nursing Activities Score (NAS) is an instrument for this goal, we propose the development of a multicenter study.

PURPOSE: To assess the nursing workload in ICUs in different countries according to the Nursing Activities Score (NAS)
STAGE 1

**General objective**: To standardize the implementation of NAS in the ICUs from different countries.

**Objective 1**: To identify differences in the items of NAS scores among the ICUs

**Objective 2**: To identify difficulties and differences in the criteria for applying NAS (based on the differences among NAS items in similar groups of patients)

STAGE 2:

**General objective**: To analyze the adequacy of nursing staff and outcomes in ICUs of different countries according to the NAS

**Objective 1**: To identify the adequacy of nursing staff according to the NAS in ICUs of different centers

**Objective 2**: To investigate the association between the adequacy of nursing staff and adverse outcomes in ICUs of different centers
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**STAGE 1**

**Objective 1:** To identify differences in the items of NAS scores among the ICUs

**Method**

- Criteria for the ICU inclusion:
  - Adult ICU
  - Current use of NAS in the ICU
  - Nurses experienced with NAS approach

- Variables:
  - Type of ICU: general or specialty
  - Casemix: age
  - Treatment (Clinical / Surgical / both)
  - Severity score index (APACHE II, SAPS II)
  - NAS: total NAS score and item by item score
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STAGE 1:

Objective 1: To identify differences in the items of NAS scores among the ICU

Method:

• Data collection: August to September 2011
  A single measure in the first 24 hours in the ICU
  NAS instrument as commonly applied in the ICU

- Inclusion criteria: aged 16 years old and more
  a minimum LOS of 24 hours in the ICU
  clinical or surgical treatment
  ICU readmission
Objective 1: To identify differences in the items of NAS score among the ICU

Expected results

- NAS score central tendency for groups of patients according to the type of ICU and patient casemix
- Frequency and outline cases by groups considering the type of the ICU
- List of items with different ratings (25% to 50%, 50% to 75%, and over 50% of the cases)
Objective 2: To identify difficulties and differences in the criteria for applying NAS (based on the differences among NAS items in similar groups of patients)

Method:

- Participants: ICU nurse who applies NAS
- Delphi Technique - 4 rounds

Expected results:

- Description of the different ways of implementing the NAS
- Guideline for NAS application, after consensus among nurses

Financial resources:

- Participating ICUs
- Data Analysis: School of Nursing-University of São Paulo-Brazil
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**STAGE 1**

**Objective 1:** To identify differences in the items of NAS score among the ICU

**Objective 2:** To identify difficulties and differences in the criteria for applying NAS

**Schedule:** 2011 and 2012

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STAGE 2:

Objective 1: To identify the adequacy of nursing staff according to the NAS in ICUs of different centers

Objective 2: To investigate the association between the adequacy of nursing staff and adverse outcomes in ICUs of different centers

Method

- Criteria for the ICU inclusion:
  - Adult ICU
  - General or specialized ICU
  - NAS use in the Unit

- Variables:
  - Type of ICU: general or specialty
  - Casemix: age
  - Treatment (clinical / surgical / both)
  - Severity score index (APACHE II, SAPS II)
  - Length of stay in the ICU
  - Discharge of the Unit
  - Daily NAS score: Total NAS
  - Daily Number of patients
  - Daily Nursing staff
  - Daily Shifts
STAGE 2

**Objective 1:** To identify the adequacy of nursing staff according to the NAS in ICUs of different centers

**Objective 2:** To investigate the association between the adequacy of nursing staff and adverse outcomes in ICUs of different centers

**Method:**

Data collection: March and April 2013
daily NAS collection according to the guideline

- Inclusion criteria: aged 16 years old and more
  any clinical or surgical treatment
  any LOS
STAGE 2:

**Objective 1:** To identify the adequacy of nursing staff according to the NAS in ICUs of different centers

**Objective 2:** To investigate the association between the adequacy of nursing staff and adverse outcomes in ICUs of different centers

**Expected results:**

Ranking of the ICUs according to the adequacy of the nursing staff

Results of the association analysis between the adequacy of nursing staff and adverse outcomes in ICUs of different centers

**Financial resources:**

Data collection: participating ICU
Data Analysis: School of Nursing-University of São Paulo-Brazil
Results presentation: European Congress of Intensive Care Nursing 2015 - participating ICUs
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Thank you!

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